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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/795,984	03/10/2004	Karp Sik Youn	46178	2260
1609	7590	08/23/2005		
ROYLANCE, ABRAMS, BERDO & GOODMAN, L.L.P. 1300 19TH STREET, N.W. SUITE 600 WASHINGTON,, DC 20036			EXAMINER FERGUSON, MARISSA L	
			ART UNIT 2854	PAPER NUMBER

DATE MAILED: 08/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/795,984	YOUN ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Marissa L. Ferguson	2854	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2005.
- 2a) ☒ This action is FINAL.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 15, 18 and 19 is/are rejected.
- 7) ☒ Claim(s) 6-14, 16, 17 and 20-22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

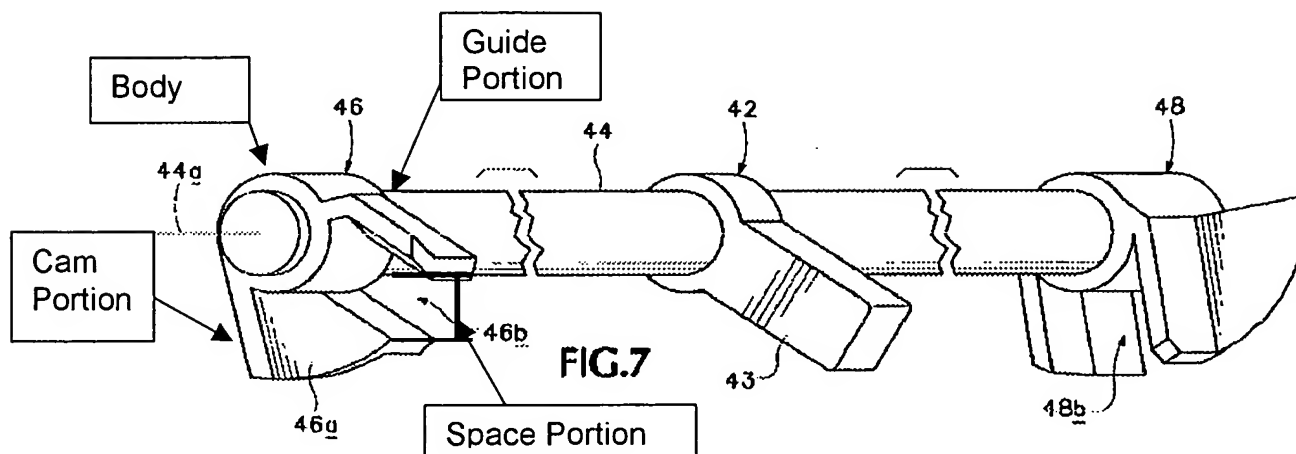
Claims 1-5, 15, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kelley et al. (US Patent 6,663,302) in view of Lim et al. (US Patent 6,705,693).

Regarding claims 1 and 5, Kelley et al. teaches a carriage (24), which is rotatably installed on a guide shaft (28,30) and includes a stacking portion (16,18,20,22) on which a cartridge is stacked, and a balancing portion (refer to figure on the next page) installed on a side opposite to the stacking portion, so as to move in a straight reciprocating motion along the guide shaft (28,30) and a head gap adjusting apparatus, which is rotatably installed in the balancing portion and adjusts a head gap by rotating the carriage centering on the guide shaft according to a thickness of a printing medium (Abstract, Column 3, Lines 64-67, Column 4, Lines 1-5 and reference made throughout patent). However, he does not explicitly disclose a stacking portion on a first of a guide shaft on which the ink cartridge is stacked and a balancing portion installed on a side of a guide shaft opposite to the stacking portion.

Lim et al. teaches a moveable carriage (101) with a cartridge (103) located on one side of a guide shaft (129) and a slider section (113 that functions as a balancing portion) located on the other side of the shaft (129). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention as taught by Kelley et al. to replace the carriage arrangement thereof with the carriage arrangement with a carriage located on one side of the shaft and the balancing portion located on the opposite side of the shaft as taught by Lim et al., since Lim et al. teaches that it is advantageous to prevent rotation in the clockwise position in order to keep the carriage portion in a balanced and stable state.

Regarding claims 2 and 18, Kelley et al. teaches a body (46b, 48a), a cam portion (46,48), which is provided on one end of the body and in which a cam radius having a predetermined shape is formed, a guide portion, which is provided on the other end of the body and is bent at a predetermined angle (Figures 9 and 10) and a support portion (44), which is provided on a side opposite to a surface in which the guide portion is formed while protruding from the body.

Regarding claim 3, Kelley et al. teaches wherein the cam portion and the guide portion protrude from the body (See figure 7 below).



Regarding claim 4, Kelley et al. teaches a cam portion and the guide portion are formed on the same surface as the body (Figure 7).

Regarding claims 5 and 19, Kelley et al. teaches wherein a space portion has a predetermined height is formed between the cam portion and the guide portion (See figure above).

### ***Allowable Subject Matter***

2. Claims 6-14, 16, 17 and 20-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Reasons for Allowance***

3. The following is an examiner's statement of reasons for allowance:

Regarding claims 6 and 20, the prior art does not teach or render obvious and elastic unit that supports the head gap adjusting apparatus, one end of the elastic unit being supported by the carriage and the other end thereof being supported by the support portion.

Regarding claims 7 and 21, the prior art does not teach or render obvious a cam portion that includes a first cam radius formed on a surface opposite to the guide portion and a second cam radius formed on a surface perpendicular to the first cam radius.

Regarding claims 9 and 16, the prior art does not teach or render obvious wherein both ends of the guide shaft are supported by a bracket, and a bent portion, which is bent to a predetermined height, is provided on one end of the bracket, and first and second stoppers are provided at a predetermined interval on a top surface of the bent portion, so as to contact the guide portion of the head gap adjusting apparatus.

#### ***Response to Arguments***

4. Applicant's arguments with respect to claims 1-5,15,18 and 19 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marissa L Ferguson whose telephone number is (571) 272-2163. The examiner can normally be reached on (M-T) 6:30am-4:00pm and every other(F) 7:30am-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached on (571) 272-2168. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Marissa L Ferguson  
Examiner  
Art Unit 2854

  
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Daniel J. Colilla  
Primary Examiner  
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